



OPEN MEETING AGENDA ITEM



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AZ CORP COMMISSION  
DOCKET CONTROL

February 27, 2009 **ORIGINAL**

Docket Control  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

RE: DEMAND SIDE MANAGEMENT SEMI-ANNUAL REPORT  
DOCKET NO. E-01345A-03-0437 & E-01345A-05-0526

Twice a year Arizona Public Service Company (APS) files DSM Semi-Annual Reports pursuant to Arizona Corporation Commission (ACC) Decision No. 67744.

Enclosed are updates to several previously submitted reports. These updates make the reports consistent with the Arizona Corporation Commission Staff's analysis and language in Decision No. 68647. The attached summary of updated documents identifies which reports and what updates were made.

Please find replacement pages as listed on the summary of updates. This filing is to inform the ACC of these revisions.

If you have any questions or concerns please contact Jeff Johnson at (602) 250-2661.

Sincerely,

Leland R. Snook

LS/dst

Attachments

CC: Jerry Anderson  
Brian Bozzo  
Terri Ford

Arizona Corporation Commission

DOCKETED

FEB 27 2009

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# SUMMARY OF REVISIONS TO DEMAND SIDE MANAGEMENT SEMI-ANNUAL REPORTS JANUARY 2005 THROUGH DECEMBER 2007

## JANUARY THROUGH JUNE 2005: DSM SEMI-ANNUAL REPORT

- Changed Low Income program savings table on page 4 – Added “Life-time kWh” column, and changed “kWh” column title to “Annual kWh”
- Changed Net Benefits to \$0 on page 5 and the footnote – to be “consistent with the ACC Staffs' analysis in Decision No. 68647, the societal benefits is equal to the societal costs, resulting in a benefits to cost ratio of 1.00.”
- Changed the following amounts in the Summary table to reflect the language in Order No. 68647, section 33. which allows Health and Safety and Repair and Replace measures, but disallows the costs unless they meet certain guidelines:

### Rebates & Incentives:

Previously Reported: \$112,263      Corrected Amount: \$97,511

### Program Total Cost:

Previously Reported: \$184,507      Corrected Amount: \$169,755

The appropriate total amounts in the summary table were adjusted by the same amount.

## JULY THROUGH DECEMBER 2005: DSM SEMI-ANNUAL REPORT

- Revised Table 2, page 3 – corrected the number of “life-time” MWh for the Low Income program to 10,004 and adjusted related sub-total and total rows.
  - Changed Low Income program savings table on page 6 – Added “Life-time kWh” column, and changed “kWh” column title to “Annual kWh”
- Changed the amounts in the following tables to reflect the language in Order No. 68647, section 33. which allows Health and Safety and Repair and Replace measures, but disallows the costs unless they meet certain guidelines:

### Table 1

#### Rebates & Incentives:

Previously Reported: \$277,337      Corrected Amount: \$257,427

#### Program Total Cost:

Previously Reported: \$361,727      Corrected Amount: \$341,816

The appropriate total amounts in Table 1 were adjusted by the same amount.

### Table 2

#### Program Cost:

Previously Reported: \$361,727      Corrected Amount: \$341,816

#### Societal Benefits:

Previously Reported: \$268,619      Corrected Amount: \$270,056

#### Societal Costs:

Previously Reported: \$289,967      Corrected Amount: \$270,056

Changed societal cost for Low Income program to set net benefits to \$0 on Table 2 and added footnote to table – to be “consistent with the ACC Staffs' analysis in

Decision No. 68647, the societal benefits is equal to the societal costs, resulting in a benefits to cost ratio of 1.00.” Made all related to changes to sub-total and total rows.

**Table 4**

Rebates & Incentives:

Previously Reported: \$389,600      Corrected Amount: \$354,937

Program Total Cost:

Previously Reported: \$546,234      Corrected Amount: \$511,571

The appropriate total amounts in Table 4 were adjusted by the same amount.

**JANUARY THROUGH JUNE 2006: DSM SEMI-ANNUAL REPORT**

- Revised Table 2, page 4 – corrected the number of “life-time” MWh for the Low Income program to 5,134 and adjusted related sub-total and total rows.
- Changed Low Income program savings table on page 8 – Added “Life-time kWh” column, and changed “kWh” column title to “Annual kWh”

Changed the amounts in the following tables to reflect the language in Order No. 68647, section 33. which allows Health and Safety and Repair and Replace measures, but disallows the costs unless they meet certain guidelines:

**Table 1**

Rebates & Incentives:

Previously Reported: \$203,229      Corrected Amount: \$150,768

Program Total Cost:

Previously Reported: \$276,578      Corrected Amount: \$224,117

The appropriate total amounts in Table 1 were adjusted by the same amount.

**Table 2**

Program Cost:

Previously Reported: \$276,578      Corrected Amount: \$224,117

Societal Benefits:

Previously Reported: \$246,225      Corrected Amount: \$193,764

Societal Costs:

Previously Reported: \$246,225      Corrected Amount: \$193,764

The appropriate total amounts in Table 2 were adjusted by the same amount.

**JULY THROUGH DECEMBER 2006: DSM SEMI-ANNUAL REPORT**

- Revised Table 2, page 4 – corrected the number of “life-time” MWh for the Low Income program to 8,293 and adjusted related sub-total and total rows.
- Changed Low Income program savings table on page 7 – Added “Life-time kWh” column, and changed “kWh” column title to “Annual kWh”
- Changed the amounts in the following tables to reflect the language in Order No. 68647, section 33. which allows Health and Safety and Repair and Replace measures, but disallows the costs unless they meet certain guidelines:

**Table 1**

Rebates & Incentives:

Previously Reported: \$266,396      Corrected Amount: \$221,540  
Program Total Cost:  
Previously Reported: \$342,193      Corrected Amount: \$297,337  
The appropriate total amounts in Table 1 were adjusted by the same amount.

**Table 2**

Program Cost:  
Previously Reported: \$342,193      Corrected Amount: \$297,337  
Societal Benefits:  
Previously Reported: \$269,405      Corrected Amount: \$224,549  
Societal Costs:  
Previously Reported: \$269,405      Corrected Amount: \$224,549  
The appropriate total amounts in Table 2 were adjusted by the same amount.

**Table 4**

Rebates & Incentives:  
Previously Reported: \$469,625      Corrected Amount: \$372,308  
Program Total Cost:  
Previously Reported: \$618,770      Corrected Amount: \$521,452  
The appropriate total amounts in Table 4 were adjusted by the same amount

**JANUARY THROUGH JUNE 2007: DSM SEMI-ANNUAL REPORT**

- Changed the amounts in the following tables to reflect the language in Order No. 68647, section 33. which allows Health and Safety and Repair and Replace measures, but disallows the costs unless they meet certain guidelines:

**Table 1**

Rebates & Incentives:  
Previously Reported: \$673,462      Corrected Amount: \$668,783  
Program Total Cost:  
Previously Reported: \$741,392      Corrected Amount: \$736,712  
The appropriate total amounts in Table 1 were adjusted by the same amount.

**Table 2**

Program Cost:  
Previously Reported: \$741,392      Corrected Amount: \$736,712  
Societal Benefits:  
Previously Reported: \$572,265      Corrected Amount: \$556,023  
Societal Costs:  
Previously Reported: \$572,265      Corrected Amount: \$556,023  
The appropriate total amounts in Table 2 were adjusted by the same amount.

**JULY THROUGH DECEMBER 2007: DSM SEMI-ANNUAL REPORT**

Changed the amounts in the following tables to reflect the language in Order No. 68647, section 33. which allows Health and Safety and Repair and Replace measures, but disallows the costs unless they meet certain guidelines:

**Table 1**

## Rebates &amp; Incentives:

Previously Reported: \$545,089      Corrected Amount: \$520,142

## Program Total Cost:

Previously Reported: \$652,066      Corrected Amount: \$627,119

The appropriate total amounts in Table 1 were adjusted by the same amount.

**Table 2**

## Program Cost:

Previously Reported: \$652,066      Corrected Amount: \$627,119

## Societal Benefits:

Previously Reported: \$542,553      Corrected Amount: \$520,234

## Societal Costs:

Previously Reported: \$542,553      Corrected Amount: \$520,234

The appropriate total amounts in Table 2 were adjusted by the same amount.

**Table 4**

## Rebates &amp; Incentives:

Previously Reported: \$1,218,161      Corrected Amount: \$1,188,925

## Program Total Cost:

Previously Reported: \$1,381,896      Corrected Amount: \$1,352,260

The appropriate total amounts in Table 4 were adjusted by the same amount

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

ACC Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	*Program Total Cost
<b>Residential</b>							
Low Income	\$97,511	-	\$1,746	\$20,830	-	\$49,668	\$169,755
Res Existing HVAC	-	\$18,487	\$62,676	\$112,708	\$151,793	\$35,779	\$381,443
Res New Const	\$15,766	-	\$75,992	\$130	\$60,224	\$57,964	\$210,076
Consumer Products	-	-	-	-	-	\$29,153	\$29,153
<b>Total for Residential</b>	<b>\$113,277</b>	<b>\$18,487</b>	<b>\$140,414</b>	<b>\$133,668</b>	<b>\$212,017</b>	<b>\$172,564</b>	<b>\$790,427</b>
<b>Non-Residential</b>							
Large Non Res Existing	-	-	-	-	-	\$38,575	\$38,575
Large Non Res New Const	-	-	-	-	-	\$42,199	\$42,199
Small Business	-	-	-	-	-	\$25,755	\$25,755
Bldg Operator Training	-	-	-	-	-	\$5,824	\$5,824
Energy Information Services	-	-	-	-	-	\$5,878	\$5,878
Schools	-	-	-	-	-	\$15,135	\$15,135
<b>Total for Non-Residential</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$133,366</b>	<b>\$133,366</b>
<b>Segment Totals</b>	<b>\$113,277</b>	<b>\$18,487</b>	<b>\$140,414</b>	<b>\$133,668</b>	<b>\$212,017</b>	<b>\$305,930</b>	<b>\$923,793</b>

<b>Program Costs</b>	<b>\$923,793</b>
<b>Meas, Eval, &amp; Research</b>	<b>\$14,956</b>
<b>Performance Incentive</b>	<b>-</b>
<b>TOTAL</b>	<b>\$938,749</b>

### **Definitions**

**Rebates & Incentives** - Includes dollars that go toward customer rebates and incentives, installation of low income weatherization and low income bill assistance.

**Training & Technical Assistance** - Includes all dollars that are used for energy efficiency training and technical assistance.

**Consumer Education** - Includes dollars that are used to support general consumer education about energy-efficient improvements.

**Program Implementation** - Program delivery costs associated with implementing the program - includes implementation contractor labor and overhead costs, as well as other direct program delivery costs.

**Program Marketing** - Includes all expenses related to marketing the program and increasing DSM consumer awareness (direct program marketing costs as opposed to general consumer education).

**Planning and Administration** - APS costs to plan, develop and administer programs- includes management of program budgets, oversight of the RFP process and implementation contractor, program development, program coordination and general overhead expenses.

\*Includes costs for existing approved programs as well as planning costs for proposed DSM portfolio plan and programs. All expenses other than Planning & Admin are for pre-approved programs. The table shows a summary roll-up of the cumulative spending for each program for the reporting period. The costs associated with the development of the programs listed in the proposed DSM Portfolio Plan, which was filed with the ACC on July 1, 2005, are also reflected in the table.

## ARIZONA PUBLIC SERVICE COMPANY

### DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

#### Evaluation and Monitoring Activities and Results

Weatherization measures must pass the cost effectiveness test that is detailed in the federal government's Weatherization Assistance Program (WAP) rules. These rules allow certain prescriptive measures which vary with the climate zone and type of housing construction. Measures not on the prescriptive list must be assessed by a computer analysis to determine the economic feasibility.

The Department of Commerce Energy Office with information from APS, is analyzing the electric energy used in weatherized homes before and after the weatherization measures are implemented. It takes a year of data before the weatherization and another year of data after the weatherization to get an accurate gauge of the impact of the measures. As the data base grows over time a more accurate picture of the impact of the weatherization activities will emerge.

Additionally, during the reporting period, APS filed for and received approval from the ACC, to proceed with a DSM baseline and market potential study. As part of the study, information will be gathered related to low income households and their awareness of energy efficiency.

#### kW and kWh Savings

Of the 275 households participating in the program, a total of 122 homes received weatherization and/or repair & replace services that contributed to the energy savings.

Savings			
Homes	kW	Annual kWh	Life-time kWh
122	36.6	243,756	4,874,000

The kW and kWh factors are based on data from the Department of Commerce Energy Office study of 150 weatherized homes. The homes were located in four different climate zones throughout the state and were representative of low income homes receiving weatherization assistance. Most homes received funding from multiple sources. The measures evaluated include duct sealing, infiltration remediation, attic insulation, shade screens and HVAC equipment replacement. The average cost per home was \$1,815.

The study normalized electric and gas savings into dollars with gas savings being about 10% of the total. The present value of the dollar savings was converted to "equivalent kWh" at 8 cents per kWh.

The annual energy and demand savings per home in this study are estimated to be 1,998 "equivalent kWh" and 0.3 kW.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### Benefits and Net Benefits/Performance Incentive Calculation

Benefits		
Homes	Benefits	Net Benefits*
122	\$130,906	\$0

\* Consistent with the ACC Staff's analysis in Decision No. 68647, the societal benefits are equal to the societal costs, resulting in a benefits to cost ratio of 1.00.

### Problems Encountered and Proposed Solutions

No problems encountered.

### Costs Incurred

Costs incurred for this program during the first half of 2005 are listed below:

Activity	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Bill Assistance	\$33,658	-	-	-	-	-	\$33,658
Health & Safety	\$457	-	-	-	-	-	\$457
Repair and Replace	\$14,295	-	-	-	-	-	\$14,295
Weatherization	\$63,853	-	\$1,258	-	-	-	\$65,111
3rd Party Manager Arizona Community Action Association	-	-	-	\$20,830	-	-	\$20,830
APS Program Support	-	-	\$488	-	-	\$49,668	\$50,156
Total	\$112,263	-	\$1,746	\$20,830	-	\$49,668	\$184,507

### Findings From All Research Projects

No research projects were undertaken.

### Other Significant Information

No items to report.



# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2005

**Table 1**  
**DSM Program Expenses**

ACC Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	*Program Total Cost
<b>Residential</b>							
Low Income	\$257,427	\$10,000	\$1,474	\$27,324	-	\$45,592	\$341,816
Res Existing HVAC	-	\$18,169	\$31,970	\$67,037	-	\$26,267	\$143,443
Res New Const	\$4,538	\$41,299	\$3,568	\$17,089	\$46,251	\$20,267	\$133,012
Consumer Products	\$399,864	-	\$4,979	\$289,559	\$43,425	\$41,548	\$779,375
<b>Totals for Residential</b>	<b>\$681,739</b>	<b>\$69,468</b>	<b>\$41,991</b>	<b>\$401,009</b>	<b>\$89,676</b>	<b>\$133,674</b>	<b>\$1,397,647</b>
<b>Non-Residential</b>							
Large Non Res Existing	-	-	-	-	-	\$75,534	\$75,534
Large Non Res New Const	-	-	-	-	-	\$86,117	\$86,117
Small Business	-	-	-	-	-	\$39,539	\$39,539
Bldg Operator Training	-	-	-	-	-	-	-
Energy Information Svcs	-	-	-	-	-	-	-
Schools	-	-	-	-	-	\$21,718	\$21,718
<b>Total for Non-Residential</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$222,908</b>	<b>\$222,908</b>
<b>Segment Totals</b>	<b>\$681,739</b>	<b>\$69,468</b>	<b>\$41,991</b>	<b>\$401,009</b>	<b>\$89,676</b>	<b>\$356,582</b>	<b>\$1,620,911</b>
<b>Program Costs</b>							<b>\$1,620,911</b>
<b>Meas, Eval, &amp; Research (MER)</b>							<b>\$222,009</b>
<b>Performance Incentive</b>							<b>\$394,805</b>
<b>TOTAL</b>							<b>\$2,237,369</b>

### Definitions

**Rebates & Incentives** - Includes dollars that go toward customer rebates and incentives, installation of low income weatherization and low income bill assistance.

**Training & Technical Assistance** - Includes all dollars that are used for energy efficiency training and technical assistance.

**Consumer Education** - Includes dollars that are used to support general consumer education about energy-efficient improvements.

**Program Implementation** - Program delivery costs associated with implementing the program - includes implementation contractor labor and overhead costs, as well as other direct program delivery costs.

**Program Marketing** - Includes all expenses related to marketing the program and increasing DSM consumer awareness (direct program marketing costs as opposed to general consumer education).

**Planning and Administration** - APS costs to plan, develop and administer programs-includes management of program budgets, oversight of the RFP process and implementation contractor, program development, program coordination and general overhead expenses.

**Measurement, Evaluation, & Research (MER)** - MER budget includes funding for some baseline studies to determine current practices, stock, and efficiency levels.

**Performance Incentive** - Share (%) of DSM net economic benefits (benefits minus cost), capped at 10% of total DSM expenditures, inclusive of the performance incentive.

\*Includes costs for existing approved programs as well as planning costs for proposed DSM portfolio plan and programs. All expenses other than Planning & Admin are for pre-approved programs. The Performance Incentive is calculated in Table 3 and pending ACC approval.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2005

**Table 2**  
**DSM Electric Savings Benefits**

	Capacity Savings MW	Lifetime <sup>1</sup> MWh Savings	Program Cost	Societal Benefits	Societal Costs	Net Benefits
<b>Residential</b>						
Consumer Products	3.35	129,664	\$779,375	\$7,268,139	\$1,829,716	\$5,438,423
Existing Home HVAC <sub>2</sub>	-	-	\$143,443	-	\$143,443	\$(143,443)
New Construction <sub>2</sub>	-	-	\$133,012	-	\$133,012	\$(133,012)
Low Income <sub>3</sub>	.075	10,004	\$341,816	\$270,056	\$270,056	\$0 <sub>5</sub>
<b>Totals for Residential</b>	<b>3.43</b>	<b>139,668</b>	<b>\$1,417,557</b>	<b>\$7,538,195</b>	<b>\$2,376,227</b>	<b>\$5,161,968</b>
<b>Non-Residential</b>						
Existing Facilities Large	-	-	\$75,534	-	\$75,534	\$(75,534)
Small Non-Residential	-	-	\$39,539	-	\$39,539	\$(39,539)
New Construction	-	-	\$86,117	-	\$86,117	\$(86,117)
Building Operator Training	-	-	-	-	-	-
Energy Information System	-	-	-	-	-	-
Schools	-	-	\$21,718	-	\$21,718	\$(21,718)
<b>Totals for Non-Residential</b>	<b>-</b>	<b>-</b>	<b>\$222,908</b>	<b>-</b>	<b>\$222,908</b>	<b>\$(222,908)</b>
<b>Subtotal</b>	<b>3.43</b>	<b>139,668</b>	<b>\$1,640,465</b>	<b>\$7,538,195</b>	<b>\$2,599,135</b>	<b>\$4,939,060</b>
Measurement, Evaluation & Research	-	-	\$222,009	-	\$222,009	\$(222,009)
Performance Incentive <sub>4</sub>	-	-	\$394,806	-	\$394,806	\$(394,805)
<b>Total</b>	<b>3.43</b>	<b>139,668</b>	<b>\$2,257,280</b>	<b>\$7,538,195</b>	<b>\$3,215,950</b>	<b>\$4,322,245</b>

1 Refers to savings over the expected lifetime of all program measures.

2 As part of the current market transformation effort, kW and kWh savings are not quantified.

3 Program Costs include weatherization and bill assistance. Societal Costs do not include bill assistance because it does not contribute to electric savings.

4 As calculated in Table 3.

5 Consistent with the ACC Staff's analysis in Decision No. 68647, the societal benefits are equal to the societal costs, resulting in a benefits to cost ratio of 1.00.

## ARIZONA PUBLIC SERVICE COMPANY

### DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2005

#### Evaluation and Monitoring Activities and Results

Weatherization measures must pass the cost effectiveness test that is detailed in the federal government's Weatherization Assistance Program (WAP) rules. These rules allow certain prescriptive measures which vary with the climate zone and type of housing construction. Measures not on the prescriptive list must be assessed by a computer analysis to determine the economic feasibility.

The Department of Commerce Energy Office with information from APS, is analyzing the electric energy used in weatherized homes before and after the weatherization measures are implemented. It takes a year of data before the weatherization and another year of data after the weatherization to get an accurate gauge of the impact of the measures. As the data base grows over time a more accurate picture of the impact of the weatherization activities will emerge.

Additionally, during the reporting period, APS filed for and received approval from the ACC, to proceed with a DSM baseline and market potential study. As part of the study, information will be gathered related to low income households and their awareness of energy efficiency.

#### kW and kWh Savings

Of the 555 households participating in the program, a total of 228 homes received weatherization and/or repair & replace services that contributed to the energy savings.

Savings			
Homes	kW	Annual kWh	Life-time kWh
228	68.4	455,544	9,110,880
Line loss savings	6.7	44,643	892,860
Total savings	75.1	500,187	10,003,746

The kW and kWh factors are based on data from the Department of Commerce Energy Office study of 150 weatherized homes. The homes were located in four different climate zones throughout the state and were representative of low income homes receiving weatherization assistance. Most homes received funding from multiple sources. The measures evaluated include duct sealing, infiltration remediation, attic insulation, shade screens and HVAC equipment replacement. The average cost per home was \$1,815.

The study normalized electric and gas savings into dollars with gas savings being about 10% of the total. The present value of the dollar savings was converted to "equivalent kWh" at 8 cents per kWh.

The annual energy and demand savings per home in this study are estimated to be 1,998 "equivalent kWh" and 0.3 kW.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2005

**Table 4**  
**DSM Program Expenses: January – December 2005**

ACC Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	*Program Total Cost
<b>Residential</b>							
Low Income	\$354,937	\$10,000	\$3,220	\$48,154	-	\$95,260	\$511,571
Res Existing HVAC	-	\$36,656	\$94,646	\$179,745	\$151,793	\$62,046	\$524,886
Res New Const	\$20,304	\$41,299	\$79,561	\$17,219	\$106,475	\$78,230	\$343,088
Consumer Products	\$399,864	-	\$4,979	\$289,559	\$43,425	\$70,701	\$808,528
<b>Totals for Residential</b>	<b>\$775,105</b>	<b>\$87,955</b>	<b>\$182,406</b>	<b>\$534,677</b>	<b>\$301,693</b>	<b>\$306,237</b>	<b>\$2188,073</b>
<b>Non-Residential</b>							
Large Non Res Existing	-	-	-	-	-	\$114,108	\$114,108
Large Non Res New Const	-	-	-	-	-	\$128,316	\$128,316
Small Business	-	-	-	-	-	\$65,293	\$65,293
Bldg Operator Training	-	-	-	-	-	\$5,824	\$5,824
Energy Information Svcs	-	-	-	-	-	\$5,878	\$5,878
Schools	-	-	-	-	-	\$36,853	\$36,853
<b>Total for Non-Residential</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$356,272</b>	<b>\$356,272</b>
<b>Segment Totals</b>	<b>\$775,105</b>	<b>\$87,955</b>	<b>\$182,406</b>	<b>\$534,677</b>	<b>\$301,693</b>	<b>\$662,509</b>	<b>\$2,544,345</b>
				<b>Program Costs</b>			<b>\$2,544,345</b>
				<b>Meas, Eval, &amp; Research</b>			<b>\$236,966</b>
				<b>Performance Incentive</b>			<b>\$394,805</b>
				<b>TOTAL</b>			<b>\$3,176,116</b>

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2006

**Table 1**  
**DSM Program Expenses: January – June 2006**

ACC Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation <sup>1</sup>	Program Marketing	Planning & Admin	Program Total Cost
<b>Residential</b>							
Low Income	\$150,768	\$1,790	\$1,405	\$36,350	\$258	\$33,546	\$224,117
Res Existing HVAC	-	\$34,472	\$55,217	\$53,399	\$50,619	\$15,780	\$209,487
Res New Const	\$20,825	\$1,968	\$392	\$25,071	\$56,342	\$18,730	\$123,328
Consumer Products	\$273,964	-	-	\$213,488	\$31,232	\$29,359	\$548,043
<b>Totals for Residential</b>	<b>\$445,557</b>	<b>\$38,230</b>	<b>\$57,014</b>	<b>\$328,308</b>	<b>\$138,451</b>	<b>\$97,415</b>	<b>\$1,104,975</b>
<b>Non-Residential</b>							
Large Non Res Existing	-	-	\$108	\$222,368	\$472	\$77,350	\$300,298
Large Non Res New Const	-	-	\$108	\$279,480	\$448	\$69,629	\$349,665
Small Business	-	-	\$80	\$152,723	\$416	\$35,798	\$189,017
Bldg Operator Training	-	\$5,378	-	\$174	-	\$392	\$5,944
Energy Information Svcs	-	-	-	-	-	\$1,230	\$1,230
Schools <sup>2</sup>	-	-	\$8	\$33,084	\$25	\$12,741	\$45,858
<b>Total for Non-Residential</b>	<b>\$0</b>	<b>\$5,378</b>	<b>\$304</b>	<b>\$687,829</b>	<b>\$1,361</b>	<b>\$197,140</b>	<b>\$892,012</b>
<b>Segment Totals</b>	<b>\$445,557</b>	<b>\$43,608</b>	<b>\$57,318</b>	<b>\$1,016,137</b>	<b>\$139,812</b>	<b>\$294,555</b>	<b>\$1,996,987</b>
<b>Program Costs</b>							<b>\$1,996,987</b>
<b>Meas, Eval, &amp; Research (MER)</b>							<b>\$326,510</b>
<b>Performance Incentive<sup>3</sup></b>							<b>\$310,491</b>
<b>TOTAL</b>							<b>\$2,633,988</b>

### **Definitions**

**Rebates & Incentives** - Includes dollars that go toward customer rebates and incentives, installation of low income weatherization and low income bill assistance.

**Training & Technical Assistance** - Includes all dollars that are used for energy efficiency training and technical assistance.

**Consumer Education** - Includes dollars that are used to support general consumer education about energy-efficient improvements.

**Program Implementation** - Program delivery costs associated with implementing the program - includes implementation contractor labor and overhead costs, as well as other direct program delivery costs.

**Program Marketing** - Includes all expenses related to marketing the program and increasing DSM consumer awareness (direct program marketing costs as opposed to general consumer education).

**Planning and Administration** - APS costs to plan, develop and administer programs-includes management of program budgets, oversight of the RFP process and implementation contractor, program development, program coordination and general overhead expenses.

**Measurement, Evaluation, & Research (MER)** -These activities will identify current baseline efficiency levels and the market potential of DSM measures, perform process evaluations, verify that energy-efficient measures are installed, track savings, and identify additional energy efficiency research.

**Performance Incentive** – Share (%) of DSM net economic benefits (benefits minus cost), capped at 10% of total DSM expenditures, inclusive of the Performance Incentive.

<sup>1</sup> Includes costs for Implementation Contractor (IC) for the Small Non-Residential, Non-Residential Existing Facilities, New Construction & Major Renovation and Schools Programs.

<sup>2</sup> Schools are allowed to receive funding from other non-residential programs as well. Refer to the subsection on the Schools Program for additional information on total funds allocated to school districts to date.

<sup>3</sup> The Performance Incentive is calculated in Table 3 and pending ACC approval.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2006

**Table 2**  
**DSM Electric Savings Benefits**

	Capacity	Lifetime <sup>1</sup>	Program	Societal	Societal	
	Savings MW	MWh Savings	Cost	Benefits	Costs	Net Benefits
<b>Residential</b>						
Consumer Products	2.903	112,065	\$548,043	\$6,122,452	\$1,495,514	\$4,626,938
Existing Home HVAC <sup>2</sup>	-	-	\$209,487	\$0	\$209,487	(\$209,487)
New Construction <sup>2</sup>	-	-	\$123,328	\$0	\$123,328	(\$123,328)
Low Income <sup>3</sup>	0.039	5,134	\$224,117	\$193,764	\$193,764	\$0 <sup>4</sup>
<b>Totals for Residential</b>	<b>2.942</b>	<b>117,199</b>	<b>\$ 1,104,975</b>	<b>\$ 6,316,216</b>	<b>\$ 2,022,093</b>	<b>\$ 4,294,123</b>
<b>Non-Residential</b>						
Existing Facilities Large	-	-	\$300,298	-	\$300,297	(\$300,297)
Small Non-Residential	-	-	\$189,017	-	\$189,017	(\$189,017)
New Construction	-	-	\$349,664	-	\$349,664	(\$349,664)
Building Operator Training	0.009	996	\$5,944	\$33,993	\$10,629	\$23,364
Energy Information System	-	-	\$1,230	-	\$1,230	(\$1,230)
Schools	-	-	\$45,858	-	\$45,858	(\$45,858)
<b>Totals for Non-Residential</b>	<b>0.009</b>	<b>996</b>	<b>\$ 892,011</b>	<b>\$ 33,993</b>	<b>\$ 896,695</b>	<b>(\$862,702)</b>
<b>Subtotal</b>						
Measurement, Evaluation & Research	-	-	\$326,510	-	\$326,510	(\$326,510)
Performance Incentive <sup>5</sup>	-	-	\$310,491	-	\$310,491	(\$310,491)
<b>Total</b>	<b>2.951</b>	<b>118,195</b>	<b>\$ 2,633,987</b>	<b>\$ 6,350,209</b>	<b>\$ 3,555,789</b>	<b>\$ 2,794,420</b>

1 Refers to savings over the expected lifetime of all program measures.

2 kW and kWh savings are not quantified for residential market transformation programs that were in place prior to April 2006.

3 Program Costs include weatherization and bill assistance. Societal Costs do not include bill assistance because it does not contribute to electric savings.

4 Consistent with the ACC Staffs' analysis in Decision No. 68647, the societal benefits is equal to the societal costs, resulting in a benefits to cost ratio of 1.00.

5 As calculated in Table 3.

## ARIZONA PUBLIC SERVICE COMPANY

### DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2006

#### **kW and kWh Savings**

Of the 296 households participating in the program, a total of 117 homes received weatherization and/or repair & replace services that contributed to the energy savings.

Savings			
Homes	kW	Annual kWh	Life-time kWh
117	35.1	233,766	4,675,320
Line loss savings	3.4	22,909	458,180
Total savings	38.5	256,675	5,133,501

The kW and kWh factors used to calculate the savings are based on data from the Department of Commerce Energy Office study of 150 weatherized homes. The study normalized electric and gas savings into dollars with gas savings being about 10% of the total. The present value of the dollar savings was converted to "equivalent kWh" at 8 cents per kWh. The annual energy and demand savings per home in this study are estimated to be 1,998 "equivalent kWh" and 0.3 kW.

#### **Benefits and Net Benefits/Performance Incentive Calculation**

The benefits and net benefits are provided in Table 2. The Performance Incentive calculation does not include the Energy Wise Program since this program has a zero net benefit and APS should not be penalized for performing well on this program. Consequently, the net benefits for the Energy Wise Program for this reporting period as shown in Table 2 are \$0.

#### **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

#### **Costs Incurred**

Costs incurred for this program during the first half of 2006 are listed below:

Activity	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Bill Assistance	\$30,353	-	-	-	-	-	\$30,353
Health & Safety	\$1,650	-	-	-	-	-	\$1,650
Repair and Replace	\$50,811	-	-	-	-	-	\$50,811
Weatherization	\$120,415	\$1,790	\$1,018	-	-	-	\$123,223
3rd Party Manager Arizona Community Action Association	-	-	-	\$33,328	-	-	\$33,328
APS Program Support	-	-	\$387	\$3,022	\$258	\$33,546	\$37,213
<b>Total</b>	<b>\$203,229</b>	<b>\$1,790</b>	<b>\$1,405</b>	<b>\$36,350</b>	<b>\$258</b>	<b>\$33,546</b>	<b>\$276,578</b>

#### **Findings From All Research Projects**

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the second half of 2006.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

**Table 1**  
**DSM Program Expenses: July – December 2006**

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation <sup>1</sup>	Program Marketing	Planning & Admin	Program Total Cost
<b>Residential</b>							
Low Income	\$221,540	\$2,819	\$1,580	\$36,589	\$4,557	\$30,251	\$297,336
Res Existing Homes HVAC	\$439,400	\$34,668	\$89,295	\$51,640	\$215,652	\$17,354	\$848,009
Res New Home Construction	\$44,778	\$57,022	\$6,294	\$28,247	\$164,354	\$38,078	\$338,773
Consumer Products	\$1,082,965	\$0	\$1,582	\$123,744	\$107,812	\$43,805	\$1,359,908
<b>Totals for Residential</b>	<b>\$1,788,683</b>	<b>\$94,510</b>	<b>\$98,750</b>	<b>\$240,219</b>	<b>\$492,376</b>	<b>\$129,488</b>	<b>\$2,844,025</b>
<b>Non-Residential</b>							
Large Existing Facilities	\$759,971	\$2,446	\$4,531	\$516,969	\$7,826	\$48,290	\$1,340,033
Large Non Res New Const	\$62,480	\$3,072	\$1,957	\$649,501	\$7,712	\$50,840	\$775,562
Small Business	\$62,240	\$0	\$1,471	\$356,283	\$6,955	\$26,804	\$453,752
Bldg Operator Training	\$0	\$17,910	\$0	\$10,757	\$4,360	\$1,186	\$34,213
Energy Information Svcs	\$0	\$0	\$0	\$12,971	\$0	\$10,094	\$23,065
Schools <sup>2</sup>	\$73,380	\$0	\$143	\$77,126	\$416	\$10,619	\$161,684
<b>Total for Non-Residential</b>	<b>\$958,071</b>	<b>\$23,428</b>	<b>\$8,100</b>	<b>\$1,623,607</b>	<b>\$27,269</b>	<b>\$147,834</b>	<b>\$2,788,309</b>
<b>Segment Totals</b>	<b>\$2,746,754</b>	<b>\$117,937</b>	<b>\$106,851</b>	<b>\$1,863,826</b>	<b>\$519,645</b>	<b>\$277,321</b>	<b>\$5,632,334</b>
<b>Program Costs</b>							<b>\$5,632,334</b>
<b>Measurement, Evaluation, &amp; Research (MER)</b>							<b>\$327,614</b>
<b>Performance Incentive<sup>3</sup></b>							<b>\$1,938,767</b>
<b>TOTAL</b>							<b>\$7,898,715</b>

### Definitions

**Rebates & Incentives** - Includes dollars that go toward customer rebates and incentives, installation of low income weatherization and low income bill assistance.

**Training & Technical Assistance** - Includes all dollars that are used for energy efficiency training and technical assistance.

**Consumer Education** - Includes dollars that are used to support general consumer education about energy-efficient improvements.

**Program Implementation** - Program delivery costs associated with implementing the program - includes implementation contractor labor and overhead costs, as well as other direct program delivery costs.

**Program Marketing** - Includes all expenses related to marketing the program and increasing DSM consumer awareness (direct program marketing costs as opposed to general consumer education).

**Planning and Administration** - APS costs to plan, develop and administer programs-includes management of program budgets, oversight of the RFP process and implementation contractor, program development, program coordination and general overhead expenses.

**Measurement, Evaluation, & Research (MER)** -These activities will identify current baseline efficiency levels and the market potential of DSM measures, perform process evaluations, verify that energy-efficient measures are installed, track savings, and identify additional energy efficiency research.

**Performance Incentive** – Share (%) of DSM net economic benefits (benefits minus cost), capped at 10% of total DSM expenditures, inclusive of the Performance Incentive.

*1 Includes costs for Implementation Contractor (IC) for the Small Non-Residential, Non-Residential Existing Facilities, New Construction & Major Renovation and Schools Programs.*

*2 Schools are allowed to receive funding from other non-residential programs as well. Refer to the subsection on the Schools Program for additional information on total funds allocated to school districts to date.*

*3 The Performance Incentive is calculated in Table 3 and the methodology/calculation is pending ACC approval.*



# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

**Table 2**  
**DSM Electric Savings Benefits**

DSM Program	Capacity Savings MW	Lifetime <sup>1</sup> MWh Savings	Program Cost	Societal Benefits	Societal Costs	Net Benefits
<b>Residential</b>						
Low Income <sup>2</sup>	0.06	8,293	\$297,193	\$224,405	\$224,405	\$0 <sup>4</sup>
Res Existing Homes HVAC <sup>3</sup>	2.15	79,236	\$848,009	\$3,122,648	\$2,065,915	\$1,056,733
Res New Home Construction <sup>3</sup>	0.12	5,653	\$338,773	\$211,581	\$342,595	(\$131,014)
Consumer Products	9.85	346,637	\$1,359,908	\$20,336,848	\$4,332,147	\$16,004,701
<b>Totals for Residential</b>	<b>12.18</b>	<b>439,819</b>	<b>\$2,843,883</b>	<b>\$23,895,482</b>	<b>\$6,965,062</b>	<b>\$16,930,420</b>
<b>Non-Residential</b>						
Large Existing Facilities	1.83	173,830	\$1,340,033	\$4,359,261	\$2,035,650	\$2,323,611
Large Non Res New Const	0.15	19,929	\$775,562	\$478,917	\$642,881	(\$163,964)
Small Business	0.12	10,274	\$453,752	\$136,036	\$437,187	(\$301,152)
Bldg Operator Training	0.03	3,983	\$34,213	\$135,961	\$54,103	\$81,858
Energy Information Svcs	0.00	0	\$23,065	\$0	\$23,065	(\$23,065)
Schools	0.13	13,291	\$161,685	\$1,386,759	\$519,182	\$867,577
<b>Total for Non-Residential</b>	<b>2.26</b>	<b>221,307</b>	<b>\$2,788,310</b>	<b>\$6,496,934</b>	<b>\$3,712,068</b>	<b>\$2,784,865</b>
<b>Subtotal</b>	<b>14.44</b>	<b>661,126</b>	<b>\$5,632,193</b>	<b>\$30,392,416</b>	<b>\$10,677,130</b>	<b>\$19,715,285</b>
Measurement, Evaluation & Research	-	-	\$327,614	-	-	(\$327,614)
Performance Incentive <sup>5</sup>			\$1,938,767			\$1,938,767
<b>TOTAL</b>			<b>\$7,898,574</b>			<b>\$21,326,438</b>

1 Refers to savings over the expected lifetime of all program measures.

2 Program Costs include weatherization and bill assistance. Societal Costs do not include bill assistance because it does not contribute to electric savings.

3 kW and kWh savings are not quantified for residential market transformation programs that were in place prior to April 2006.

4 Consistent with the ACC Staffs' analysis in Decision No. 68647, the societal benefits is equal to the societal costs, resulting in a benefits to cost ratio of 1.00.

5 As calculated in Table 3.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

The Department of Commerce Energy Office with information from APS, is analyzing the electric energy used in weatherized homes before and after the weatherization measures are implemented. It takes a year of data before the weatherization and another year of data after the weatherization to get an accurate gauge of the impact of the measures. As the data base grows over time a more accurate picture of the impact of the weatherization activities will emerge.

### kW and kWh Savings

Of the 459 households participating in the program, a total of 189 homes received weatherization and/or repair & replace services that contributed to the energy savings.

No. of Homes	kW Savings	Annual kWh Savings	Life-time kWh Savings
189	62.26	414,629	8,292,579

The final savings are adjusted for line losses (9.8%).

The kW and kWh factors used to calculate the savings are based on data from the Department of Commerce Energy Office study of 150 weatherized homes. The study normalized electric and gas savings into dollars with gas savings being about 10% of the total. The present value of the dollar savings was converted to "equivalent kWh" at 8 cents per kWh. The annual energy and demand savings per home in this study are estimated to be 1,998 "equivalent kWh" and 0.3 kW.

### Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The Performance Incentive calculation does not include the Energy Wise Program since this program has a zero net benefit and APS should not be penalized for performing well on this program. Consequently, the net benefits for the Energy Wise Program for this reporting period as shown in Table 2 are \$0.

### Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

### Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

Activity	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Bill Assistance	\$72,788	-	-	-	-	-	\$72,788
Health & Safety	\$0	-	-	-	-	-	\$0
Repair and Replace	\$44,856	-	-	-	-	-	\$44,856
Weatherization	\$148,753	-	\$915	-	-	-	\$149,668
3rd Party Manager Arizona Community Action Association	-	-	-	\$29,162	-	-	\$29,162
APS Program Support	-	\$2,819	\$665	\$7,427	\$4,557	\$30,251	\$45,719
<b>Total</b>	<b>\$266,396</b>	<b>\$2,819</b>	<b>\$1,580</b>	<b>\$36,589</b>	<b>\$4,557</b>	<b>\$30,251</b>	<b>\$342,193</b>

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

**Table 4**  
**DSM Program Expenses: January – December 2006**

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Program Total Cost
<b>Residential</b>							
Low Income	\$372,308	\$4,610	\$2,984	\$72,938	\$4,815	\$63,797	\$521,452
Res Existing Homes HVAC	\$439,400	\$69,140	\$144,512	\$103,969	\$266,271	\$33,134	\$1,056,426
Res New Home Construction	\$65,602	\$58,990	\$6,686	\$53,318	\$220,696	\$57,878	\$463,170
Consumer Products	\$1,356,929	\$0	\$1,582	\$337,232	\$139,045	\$73,164	\$1,907,952
<b>Totals for Residential</b>	<b>\$2,234,239</b>	<b>\$132,740</b>	<b>\$155,764</b>	<b>\$567,457</b>	<b>\$630,827</b>	<b>\$227,973</b>	<b>\$3,949,000</b>
<b>Non-Residential</b>							
Large Existing Facilities	\$759,971	\$2,446	\$4,638	\$739,337	\$8,298	\$125,640	\$1,640,330
Large Non Res New Const	\$62,480	\$3,072	\$2,064	\$928,981	\$8,160	\$120,469	\$1,125,226
Small Business	\$62,240	\$0	\$1,550	\$509,006	\$7,371	\$62,602	\$642,769
Bldg Operator Training	\$0	\$23,288	\$0	\$10,931	\$4,360	\$1,578	\$40,157
Energy Information Svcs	\$0	\$0	\$0	\$12,971	\$0	\$11,324	\$24,295
Schools	\$73,380	\$0	\$151	\$110,211	\$441	\$23,360	\$207,543
<b>Total for Non-Residential</b>	<b>\$958,071</b>	<b>\$28,806</b>	<b>\$8,403</b>	<b>\$2,311,437</b>	<b>\$28,630</b>	<b>\$344,973</b>	<b>\$3,680,320</b>
<b>Segment Totals</b>	<b>\$3,192,310</b>	<b>\$161,546</b>	<b>\$164,167</b>	<b>\$2,878,894</b>	<b>\$659,457</b>	<b>\$572,946</b>	<b>\$7,629,320</b>
				<b>Program Costs</b>			<b>\$7,629,320</b>
				<b>Measurement, Evaluation, &amp; Research (MER)</b>			<b>\$654,124</b>
				<b>Performance Incentive</b>			<b>\$2,249,258</b>
				<b>TOTAL</b>			<b>\$10,532,702</b>

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2007

**Table 1**  
**DSM Program Expenses: January – June 2007**

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation <sup>1</sup>	Program Marketing	Planning & Admin	Program Total Cost
<b>Residential</b>							
Low Income	\$668,783	\$1,169	\$3,696	\$28,257	\$4,557	\$30,251	\$736,713
Res Existing Homes HVAC	\$533,750	\$32,457	\$70,223	\$90,855	\$95,186	\$20,661	\$843,132
Res New Home Construction	\$140,000	\$818	\$2,699	\$85,516	\$137,340	\$36,232	\$402,605
Consumer Products	\$1,002,403	\$586	\$750	\$237,511	\$29,680	\$55,004	\$1,325,934
<b>Totals for Residential</b>	<b>\$2,344,936</b>	<b>\$35,030</b>	<b>\$77,368</b>	<b>\$442,139</b>	<b>\$266,763</b>	<b>\$142,148</b>	<b>\$3,308,384</b>
<b>Non-Residential</b>							
Large Existing Facilities	\$1,157,414	\$15,420	\$8,000	\$719,656	\$5,847	\$90,346	\$1,996,683
Large Non Res New Const	\$51,381	\$13,403	\$55	\$373,235	\$2,611	\$52,859	\$493,544
Small Business	\$19,670	\$390	\$5,447	\$240,257	\$1,859	\$31,958	\$299,581
Bldg Operator Training	\$0	\$12,688	\$0	\$6,758	\$7,162	\$0	\$26,608
Energy Information Svcs	\$0	\$0	\$583	\$23,100	\$0	\$2,266	\$25,949
Schools <sup>2</sup>	\$39,220	\$2,193	\$837	\$95,000	\$644	\$13,620	\$151,514
<b>Total for Non-Residential</b>	<b>\$1,267,685</b>	<b>\$44,094</b>	<b>\$14,922</b>	<b>\$1,458,006</b>	<b>\$18,123</b>	<b>\$191,049</b>	<b>\$2,993,879</b>
<b>Segment Totals</b>	<b>\$3,612,621</b>	<b>\$79,124</b>	<b>\$92,290</b>	<b>\$1,900,145</b>	<b>\$284,886</b>	<b>\$333,197</b>	<b>\$6,302,263</b>
							<b>Program Costs</b>
							<b>\$6,302,263</b>
							<b>Measurement, Evaluation, &amp; Research (MER)</b>
							<b>\$537,918</b>
							<b>Performance Incentive<sup>3</sup></b>
							<b>\$0 *</b>
							<b>TOTAL</b>
							<b>\$6,840,181</b>

### Definitions

**Rebates & Incentives** - Includes dollars for customer rebates and incentives, installation of low income weatherization and low income bill assistance.

**Training & Technical Assistance** - Includes all dollars that are used for energy efficiency training and technical assistance.

**Consumer Education** - Includes dollars that are used to support general consumer education about energy-efficient improvements.

**Program Implementation** - Program delivery costs associated with implementing the program - includes implementation contractor labor and overhead costs, as well as other direct program delivery costs.

**Program Marketing** - Includes all expenses related to marketing the program and increasing DSM consumer awareness (direct program marketing costs as opposed to general consumer education).

**Planning and Administration** - APS costs to plan, develop and administer programs-includes management of program budgets, oversight of the RFP process and implementation contractor, program development, program coordination and general overhead expenses.

**Measurement, Evaluation, & Research (MER)** -These activities will identify current baseline efficiency levels and the market potential of DSM measures, perform process evaluations, verify that energy-efficient measures are installed, track savings, and identify additional energy efficiency research.

**Performance Incentive** - Share (%) of DSM net economic benefits (benefits minus cost), capped at 10% of total DSM expenditures, inclusive of the Performance Incentive.

1. Includes costs for Implementation Contractor (IC) for the Small Non-Residential, Non-Residential Existing Facilities, New Construction & Major Renovation and Schools Programs.

2. Schools are allowed to receive funding from other non-residential programs as well. Refer to the subsection on the Schools Program for additional information on total funds allocated to school districts to date.

3. The Performance Incentive is calculated in Table 3.

\* Maximum Performance Incentive allowed is 10% of the spending level as ordered in Decision No. 67744. DSM spending to date is \$20,586,385, therefore the maximum Performance Incentive is \$2,058,639.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2007

**Table 2**  
**DSM Electric Savings Benefits**

DSM Program	Capacity Savings MW	Lifetime <sup>1</sup> MWh Savings	Program Cost	Societal Benefits	Societal Costs	Net Benefits
<b>Residential</b>						
Low Income <sup>2</sup>	0.06	401	\$736,712	\$556,023	\$556,023	\$0 <sup>4</sup>
Res Existing Homes HVAC <sup>3</sup>	2.16	78,948	\$843,131	\$3,119,223	\$1,950,841	\$1,168,383
Res New Home Construction <sup>3</sup>	0.52	24,426	\$402,605	\$914,239	\$472,605	\$441,634
Consumer Products	11.4	405,686	\$1,325,933	\$25,106,875	\$5,405,772	\$19,701,104
<b>Totals for Residential</b>	<b>14.14</b>	<b>509,461</b>	<b>\$3,308,381</b>	<b>\$29,696,360</b>	<b>\$8,385,240</b>	<b>\$21,311,120</b>
<b>Non-Residential</b>						
Large Existing Facilities	2.59	279,878	\$1,996,683	\$6,952,518	\$3,074,915	\$3,877,603
Large Non Res New Const	0.35	20,612	\$493,544	\$486,981	\$599,267	(\$112,286)
Small Business	0.14	10,712	\$299,582	\$208,344	\$326,225	(\$117,881)
Bldg Operator Training	0.02	2,545	\$26,607	\$86,864	\$38,069	\$48,795
Energy Information Svcs	0.00	0	\$25,949	\$0	\$25,949	(\$25,949)
Schools	0.11	9,604	\$151,514	\$215,115	\$190,524	\$24,591
<b>Total for Non-Residential</b>	<b>3.21</b>	<b>323,351</b>	<b>\$2,993,879</b>	<b>\$7,949,822</b>	<b>\$4,254,949</b>	<b>\$3,694,873</b>
<b>Subtotal</b>	<b>17.35</b>	<b>832,812</b>	<b>\$6,302,261</b>	<b>\$23,671,077</b>	<b>\$6,740,657</b>	<b>\$25,005,993</b>
Measurement, Evaluation & Research	-	-	\$537,918	-	-	(\$537,918)
Performance Incentive <sup>5</sup>			\$0 *			\$0 *
<b>TOTAL</b>	<b>17.35</b>	<b>832,812</b>	<b>\$6,840,179</b>	<b>\$23,671,077</b>	<b>6,740,657</b>	<b>\$24,468,076</b>

1. Refers to savings over the expected lifetime of all program measures.

2. Program Costs include weatherization and bill assistance. Societal Costs do not include bill assistance because it does not contribute to electric savings.

3. kW and kWh savings are not quantified for residential market transformation programs that were in place prior to April 2006.

4. Consistent with the ACC Staffs' analysis in Decision No. 68647, the societal benefits is equal to the societal costs, resulting in a benefit to cost ratio of 1.00.

5. As calculated in Table 3.

\* Maximum Performance Incentive allowed is 10% of the spending level as ordered in Decision No. 67744. DSM spending to date is \$20,586,385, therefore the maximum Performance Incentive is \$2,058,639.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2007

**Table 1**  
**DSM Program Expenses: July – December 2007**

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation <sup>1</sup>	Program Marketing	Planning & Admin	Program Total Cost
<b>Residential</b>							
Low Income	\$520,142	\$9,828	\$2,629	\$53,949	\$3,954	\$36,618	\$627,119
Res Existing Homes HVAC	\$550,450	\$21,815	\$92,223	\$219,406	\$208,143	\$22,317	\$1,114,354
Res New Home Construction	\$600,400	\$72,550	\$8,123	\$116,913	\$420,518	\$30,392	\$1,248,896
Consumer Products	\$1,686,041	\$202	\$10,767	\$598,340	\$398,207	\$48,132	\$2,741,689
<b>Totals for Residential</b>	<b>\$3,357,033</b>	<b>\$104,395</b>	<b>\$113,741</b>	<b>\$988,608</b>	<b>\$1,030,821</b>	<b>\$137,459</b>	<b>\$5,732,058</b>
<b>Non-Residential</b>							
Large Existing Facilities	\$2,390,127	\$48,310	\$13,946	\$713,583	\$364,224	\$103,573	\$3,633,763
Large Non Res New Const	\$605,609	\$2,663	\$6,536	\$373,235	\$89,343	\$28,263	\$1,105,647
Small Business	\$111,800	\$0	\$4,475	\$240,291	\$56,543	\$13,282	\$426,390
Bldg Operator Training	\$0	\$6,898	\$0	\$4,354	\$4,261	\$53	\$15,566
Energy Information Svcs	\$3,447	\$0	\$0	\$8,398	\$0	\$2,412	\$14,257
Schools <sup>2</sup>	\$159,599	\$0	\$2,011	\$95,000	\$30,050	\$4,474	\$291,135
<b>Total for Non-Residential</b>	<b>\$3,270,581</b>	<b>\$57,870</b>	<b>\$26,968</b>	<b>\$1,434,861</b>	<b>\$544,421</b>	<b>\$152,057</b>	<b>\$5,486,758</b>
<b>Segment Totals</b>	<b>\$6,627,615</b>	<b>\$162,265</b>	<b>\$140,709</b>	<b>\$2,423,469</b>	<b>\$1,575,242</b>	<b>\$289,516</b>	<b>\$11,218,816</b>
				<b>Program Costs</b>			<b>\$11,218,816</b>
				<b>Measurement, Evaluation, &amp; Research (MER)</b>			<b>\$643,278</b>
				<b>Performance Incentive<sup>3</sup></b>			<b>\$679,672</b>
				<b>TOTAL</b>			<b>\$12,541,766</b>

### **Definitions**

**Rebates & Incentives** - Includes dollars that go toward customer rebates and incentives, installation of low income weatherization and low income bill assistance.

**Training & Technical Assistance** - Includes all dollars that are used for energy efficiency training and technical assistance.

**Consumer Education** - Includes dollars that are used to support general consumer education about energy-efficient improvements.

**Program Implementation** - Program delivery costs associated with implementing the program - includes implementation contractor labor and overhead costs, as well as other direct program delivery costs.

**Program Marketing** - Includes all expenses related to marketing the program and increasing DSM consumer awareness (direct program marketing costs as opposed to general consumer education).

**Planning and Administration** - APS costs to plan, develop and administer programs-includes management of program budgets, oversight of the RFP process and implementation contractor, program development, program coordination and general overhead expenses.

**Measurement, Evaluation, & Research (MER)** -These activities will identify current baseline efficiency levels and the market potential of DSM measures, perform process evaluations, verify that energy-efficient measures are installed, track savings, and identify additional energy efficiency research.

**Performance Incentive** – Share (%) of DSM net economic benefits (benefits minus cost), capped at 10% of total DSM expenditures, inclusive of the Performance Incentive.

<sup>1</sup> Includes costs for Implementation Contractor (IC) for the Small Non-Residential, Non-Residential Existing Facilities, New Construction & Major Renovation and Schools Programs.

<sup>2</sup> Schools are allowed to receive funding from other non-residential programs as well. Refer to the subsection on the Schools Program for additional information on total funds allocated to school districts to date.

<sup>3</sup> The Performance Incentive is calculated in Table 3 and the methodology/calculation was approved by the ACC in Decision No. 69663.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2007

**Table 2**  
**DSM Electric Savings Benefits**

DSM Program	Capacity Savings MW	Lifetime <sup>1</sup> MWh Savings	Program Cost	Societal Benefits	Societal Costs	Net Benefits
<b>Residential</b>						
Low Income <sup>2,6</sup>	0.06	5,144	\$627,119	\$520,234	\$520,234	\$0 <sup>4</sup>
Res Existing Homes HVAC <sup>3</sup>	2.81	102,181	\$1,114,354	\$4,048,538	\$2,691,291	\$1,357,247
Res New Home Construction <sup>3</sup>	2.22	104,753	\$1,248,896	\$3,920,777	\$1,549,032	\$2,371,745
Consumer Products	14.63	473,307	\$2,741,689	\$28,666,482	\$6,771,796	\$21,894,686
<b>Totals for Residential</b>	<b>19.72</b>	<b>685,385</b>	<b>\$5,732,058</b>	<b>\$37,156,031</b>	<b>\$11,532,353</b>	<b>\$25,623,678</b>
<b>Non-Residential</b>						
Large Existing Facilities	4.55	550,180	\$3,633,763	\$13,858,925	\$6,030,695	\$7,828,230
Large Non Res New Const	1.18	216,883	\$1,105,647	\$5,901,793	\$1,676,160	\$4,225,633
Small Business	0.26	21,591	\$426,390	\$501,762	\$482,651	\$19,111
Bldg Operator Training	0.01	1,438	\$15,566	\$47,814	\$29,216	\$18,598
Energy Information Svcs	0.00	0	\$14,257	\$0	\$14,257	(\$14,257)
Schools	0.35	40,707	\$291,135	\$990,037	\$253,116	\$736,921
<b>Total for Non-Residential</b>	<b>6.35</b>	<b>830,799</b>	<b>\$5,486,758</b>	<b>\$21,300,331</b>	<b>\$8,486,095</b>	<b>\$12,814,236</b>
<b>Subtotal</b>	<b>26.07</b>	<b>1,516,184</b>	<b>\$11,218,816</b>	<b>\$58,456,362</b>	<b>\$20,018,448</b>	<b>\$38,437,914</b>
Measurement, Evaluation & Research	-	-	\$643,278	-	-	(\$643,278)
Performance Incentive <sup>5</sup>			\$679,672			(\$679,672)
<b>TOTAL</b>			<b>\$12,541,766</b>			<b>\$37,114,964</b>

1 Refers to savings over the expected lifetime of all program measures.

2 Program Costs include weatherization and bill assistance. Societal Costs do not include bill assistance because it does not contribute to electric savings.

3 kW and kWh savings are not quantified for residential market transformation programs that were in place prior to April 2006.

4 Consistent with the ACC Staffs' analysis in Decision No. 68647, the societal benefit is equal to the societal cost, resulting in a benefit to cost ratio of 1.00.

5 As calculated in Table 3.

6 Semi-Annual Reports submitted prior to the July-December 2007 Report inadvertently reported only annual MWh savings for the Low Income Program. Starting with this report (July-December 2007 Report), lifetime MWh savings are being reported for the Low Income Program.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2007

**Table 4**  
**DSM Program Expenses: January – December 2007**

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Program Total Cost
<b>Residential</b>							
Low Income	\$1,188,925	\$10,996	\$6,325	\$77,514	\$5,115	\$63,785	\$1,352,660
Res Existing Homes HVAC	\$1,084,200	\$54,272	\$162,446	\$310,261	\$303,329	\$42,978	\$1,957,485
Res New Home Const	\$740,400	\$73,368	\$10,822	\$202,429	\$557,858	\$66,624	\$1,651,501
Consumer Products	\$2,688,444	\$788	\$11,517	\$835,851	\$427,887	\$103,136	\$4,067,622
<b>Totals for Residential</b>	<b>\$5,701,969</b>	<b>\$139,424</b>	<b>\$191,110</b>	<b>\$1,426,055</b>	<b>\$1,294,189</b>	<b>\$276,523</b>	<b>\$9,029,269</b>
<b>Non-Residential</b>							
Large Existing Facilities	\$3,547,540	\$63,730	\$21,946	\$1,433,239	\$370,071	\$193,919	\$5,630,446
Large Non Res New Const	\$656,990	\$16,065	\$6,591	\$746,469	\$91,954	\$81,122	\$1,599,191
Small Business	\$131,471	\$390	\$9,922	\$480,548	\$58,402	\$45,240	\$725,973
Bldg Operator Training	\$0	\$19,585	\$0	\$11,112	\$11,423	\$53	\$42,173
Energy Information Svcs	\$3,447	\$0	\$583	\$31,498	\$0	\$4,678	\$40,206
Schools	\$198,819	\$2,193	\$2,848	\$190,000	\$30,694	\$18,094	\$442,649
<b>Total for Non-Residential</b>	<b>\$4,538,267</b>	<b>\$101,963</b>	<b>\$41,890</b>	<b>\$2,892,866</b>	<b>\$562,545</b>	<b>\$343,106</b>	<b>\$8,480,637</b>
<b>Segment Totals</b>	<b>\$10,240,236</b>	<b>\$241,387</b>	<b>\$233,000</b>	<b>\$4,318,921</b>	<b>\$1,856,733</b>	<b>\$619,628</b>	<b>\$17,509,906</b>
				<b>Program Costs</b>			<b>\$17,509,906</b>
				<b>Measurement, Evaluation, &amp; Research (MER)</b>			<b>\$1,181,197</b>
				<b>Performance Incentive</b>			<b>\$679,672</b>
				<b>TOTAL</b>			<b>\$19,370,775</b>